

REMARKS

Applicants thank Examiners Lish and Henderson for conducting the kind and courteous discussion with Applicants' representative, Daniel R. Evans, on January 7, 2005. The content of the discussion is reflected in the amendments to the claims and the comments contained herewith.

During the discussion, Applicants' representative requested that the Examiner clarify the statement made on page 2 of the Office Action dated October 29, 2004, which reads as follows:

"It is held that applicant's reference to "dry" sodium percarbonate requires that the sodium percarbonate have a moisture content of zero. If, the moisture content of the sodium percarbonate is above zero, no difference is seen between the thermal treatment of the applicant and the drying processes of James et al. and Klasen et al. In view of this distinction, the rejections over James et al. and Klasen et al. have been withdrawn."

Applicants' representative directed the Examiners' attention to the data on page 12 of the Specification, which clearly shows that "dry" does not mean "anhydrous" (i.e., free of all water), as asserted by the Examiner.

Applicants' representative also explained the importance of claimed invention in terms of improved storage stability of sodium percarbonate. In particular, it was noted that it is desirable to employ sodium percarbonate in laundry detergents, for example, rather than chlorinated bleaches; as it is much safer to handle and is relatively gentler on garments, surfaces, etc. than is chlorinated-bleach-products. One drawback associated with percarbonate-based detergents is the fact that over time the percarbonate loses its cleansing activity under standard storage conditions. Therefore, any method that serves to increase the lifetime of percarbonate materials is of significant importance to this field.

The claimed invention is directed to providing a solution to this problem by achieving a process comprising thermally treating coated or uncoated dry sodium percarbonate with

continuously replacing ambient air for a time of at least 2 minutes at a temperature from 70°C to 120°C; wherein the thermally treating does not result in a substantial reduction of the oxygen and moisture content of the dry sodium percarbonate.

As discussed with the Examiners on January 7, 2005, none of the references of record disclose or suggest that coated or uncoated sodium percarbonate may be thermally treated in a manner such that there is no substantial reduction of the oxygen and moisture content of the dry sodium percarbonate.

The reasoning for this position was explained during the discussion and is summarized in the following comments.

The Examiner's attention is directed to the following Table, which reproduces the data shown in Table 1 on page 12 of the Specification. While the claimed invention is by no means limited by this data, an inspection of the data can be quite informative. For example, the sample designated "Start," represents a "baseline" value of coated dry sodium percarbonate in terms of the oxygen content (Oa (%)), amount of water (Weight Loss (%)), and Stability (TAM Value). Inspection of the data for Examples 1-5 shows that thermal treatment at temperatures ranging from 80°C to 100°C does not substantially reduce the oxygen or water content, but that the Stability, as measured by a reduction in the TAM Value, improves upon treatment.

No	T (°C)	Oa (%)	Weight Loss (%) (IR Balance)	TAM Value (μW/g)
Start		13.7	1.3	10.6
1	80	13.7	1.0	9.3
2	85	13.7	0.8	8.1
3	90	13.6	1.0	7.3
4	95	13.5	1.1	6.3
5	100	13.0	1.5	4.8

The Examiner is reminded that when percarbonate is stored it undergoes decomposition with time. The heat that is evolved when the material decomposes is measurable via microcalorimetry (see page 10, second full paragraph). A lower TAM Value relates to a lower amount of heat that is being evolved per unit mass of sodium percarbonate material. The lower amount of heat that is being evolved upon storage per unit mass, the more stable the material. Of course, an increase in stability of the material results in an increase in lifetime of the sodium percarbonate and an overall improvement in the "activity" of the treated sodium percarbonate.

This aspect of the claimed invention is nowhere described or suggested in any of the cited references and serves as at least one basis for the novel and unobvious aspects of the claimed invention.

The rejection of Claims 1-2, 4-6, 8-11, and 21 under 35 U.S.C. § 103(a) over the disclosure of U.S. Patent No. 4,421,669 (hereinafter referred to as US '669) is respectfully traversed.

US '669 does not suggest the claimed invention.

US '669 discloses a process for the stabilization of particles containing peroxygen compounds by coating using coating agents that are insoluble in water and melt at low temperatures, such as waxes and bleaching compositions containing particles stabilized according to this process (col. 1, *ll.* 9-14). For example, US '669 describes suspending peroxygen particles in a fluidized bed at a given temperature, and then coating the suspended particles with a coating agent that melts at the given temperature (col. 2, *ll.* 3-12). US '669 does not provide too much detail about the manner in which the peroxygen compounds is prepared, except that they are prepared by standard methods (col. 4, *ll.* 24-33). However, once the particles are coated there is no suggestion to heat the particles any further. Instead,

US '669 states that once the particles are coated, then the coated particles are cooled for an appropriate period of time (col. 8, *ll.* 48-49).

This is in contrast to that which is currently claimed. As noted above, the claimed process is applicable to coated or uncoated dry sodium percarbonate. However, regardless of the presence or the absence of coating material, the additional thermal treatment step has been shown to increase the overall stability of this material. An aspect that is not suggested by the disclosure of US '669. It is respectfully requested that the Examiner acknowledge the same and withdraw this rejection.

The rejection of Claim 7 under 35 U.S.C. § 103(a) over US '669 is obviated by amendment.

Upon entry of the amendment, Claim 7 will be canceled.

It is respectfully requested that the Examiner withdraw this rejection.

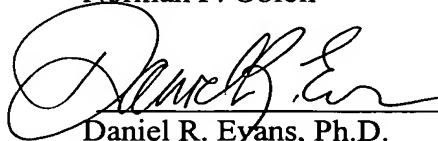
In view of the amendments to the Claims, the comments contained herewith, and the data found in the Specification, it is believed that every aspect of the claimed invention is novel and unobvious over the references of record. It is respectfully requested that the Examiner acknowledge the same and pass this application to issue. Should the Examiner deem that a personal or telephonic interview would be helpful in advancing this application toward allowance, he is encouraged to contact Applicants' undersigned representative at the below-listed telephone number.

Respectfully submitted,

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